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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,963	06/07/2007	Gerd-Rudiger Klose	016273-01100	6637

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EXAMINER
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TOLIN, MICHAEL A

ART UNIT	PAPER NUMBER
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1745

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/587,963	<b>Applicant(s)</b> KLOSE, GERD-RUDIGER	
	<b>Examiner</b> MICHAEL A. TOLIN	<b>Art Unit</b> 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-19,22-24,37,38,40-44 and 47 is/are pending in the application.
- 4a) Of the above claim(s) 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-12,17-19,22-24,37,38,40-44 and 47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9-21-10,6-10-09,7-31-06</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Species I-A and II-A in the reply filed on 20 December 2010 is acknowledged.

The requirement is still deemed proper and is therefore made FINAL.

Applicant argues none of the current claims are drawn to non-elected species. The examiner respectfully disagrees.

It is clear from the disclosure that claim 13 is directed to the use of solvent adhesives. See Applicant's specification (page 15, lines 7-10). In contrast, the elected heat sealing adhesives are disclosed as being activated by an idling heating roller rather than the contact rollers of claim 13. See Applicant's specification (page 17, lines 16-20).

Regarding claim 14, the only disclosure of spraying bonding agent is with respect to viscous dispersion adhesives. See Applicant's specification (page 24, lines 6-10). There is no disclosure of spraying the elected heat sealing adhesives.

It is clear from the disclosure that claims 15 and 16 are directed to viscous dispersion and/or water-silicate adhesives. See Applicant's specification (page 15, lines 15-31).

Since claims 13-16 are drawn to the use of adhesives in non-elected species, these claims have been withdrawn from consideration.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-6, 8-12, 17-19, 22-24, 37, 38, 40-44 and 47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the limitation of “such that the mineral fibers extend at right angles in relation to the large surfaces of the secondary nonwoven material” is confusing and inconsistent with the disclosed and claimed invention. This limitation suggests that individual mineral fibers are perpendicular to the opposed faces of the secondary nonwoven material. However, the claimed dangling and displacing limitations, as shown in Applicant’s Figure 1, do not suggest a process in which mineral fibers would be expected to be perpendicular to the opposed faces of the secondary nonwoven material. Specifically, the dangling at right angles shown at numerals 16 and 18 of Applicant’s Figure 1 provides fibers which extend generally diagonally in the horizontal plane. The subsequent displacing shown at numerals 20 and 24 provides folded portions which extend at right angles in relation to the large surfaces of the secondary nonwoven material. However, the mineral fibers themselves extend generally diagonally in a vertical plane after such displacing, as is clear from a close examination of Applicant’s Figure 1. The examiner suggests amending the claim language to more accurately describe the direction of the mineral fibers in the secondary nonwoven material.

Further regarding claim 1, the location of the transitional phrase is unclear. The examiner suggests using the word --comprising-- to separate the preamble from the body of the claim. For the purpose of examination, the word "wherein" in line 2 has been interpreted as the transitional phrase.

Regarding claim 2, there is no antecedent basis for the mineral fibers which extend substantially parallel to the large surfaces. The examiner suggests adding language to introduce such fibers.

Regarding claim 3, it is unclear if the limitation "a bonding agent already contained" requires a step of providing such bonding agent in the primary nonwoven material. In particular, there is no mention of such binding agent in parent claim 1. The examiner suggests adding language which indicates providing the bonding agent in the primary nonwoven material.

Regarding claim 12, there is no antecedent basis for bonding agents present in said web.

Similar problems to those noted above are found in claims 40, 42 and 44.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1, 3-6, 8-12, 19, 22-24, 37, 38, 40-44 and 47 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Noergaard (US 5981024).

Noergaard teaches a method for the production of a web of insulating material made of mineral fibers wherein the mineral fibers are made from a melt and deposited onto a conveyor as a primary nonwoven, the primary nonwoven is dangled at right angles in relation to the longitudinal extension thereof and is deposited as a secondary nonwoven onto a second conveyor, the secondary nonwoven material is displaced in the claimed manner, and the secondary nonwoven material is divided in the claimed manner into two webs of insulating material. See Figures 1 and 7. Figure 7 of Noergaard shows that laminations are applied to the large surfaces rather than to at least one of the separating surfaces, as claimed. However, it is clear from Noergaard that insulating products may be provided with laminations on either or both sides of the insulating material (column 19, lines 15-21). Thus one of ordinary skill in the art reading Noergaard would have reasonably understood the reference to suggest application of foil materials which satisfy the claimed lamination to either or both sides of the insulating materials shown in Figure 7, according to the desired properties of the final product. In any event, it is well known in the art of producing insulating materials that such foils may be placed on either or both sides of an insulating material, as evidenced by the above cited portion of Noergaard. To the extent that the suggestion to apply such foils to either or both sides of the insulating webs formed in Figure 7 is not implicit in Noergaard, it would have been obvious to one of ordinary skill in the art at the time of

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the invention to provide this limitation because one of ordinary skill in the art would have been motivated to provide such foils on either or both sides of the insulating material in accordance with methods well known in the art.

The limitations of claims 3-5 are clearly taught by Noergaard.

Regarding claim 6, Noergaard clearly teaches multilayer foils (column 12, lines 58-64).

The limitations of claim 8, 12 and 44 are well known in the art for the motivation of suitably connecting a foil of the type suggested by Noergaard to the insulating material.

Regarding claim 9, the foil materials suggested by Noergaard clearly provide external reinforcement and/or protection. Alternatively, providing such foils with a decorative layer is conventional in the art to provide manufacturer identification or a desired aesthetic effect.

Regarding claim 10, Noergaard clearly suggests drawing the lamination off a roll and feeding it together with the web of insulating material to a processing station for connection.

Regarding claim 11, as noted above Noergaard suggests providing a multilayer lamination. Drawing several of the layers of the lamination off a roll requires no more than drawing a multilayer lamination off a roll. Such multilayer laminations are conventionally provided on a roll, and as noted above, Noergaard suggests drawing the lamination off of a roll and feeding it to a connecting station.

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Regarding claim 19, removing and exhausting mineral fiber dust during a cutting operation of a mineral fiber batt, for example with a combined saw and exhaust unit, is well known in the art to prevent such fiber dust from entering the atmosphere and becoming a hazard to workers. Such well known removal and exhaustion during the cutting operation would necessarily occur prior to application of the laminations, because such laminations cannot be applied to the separating surfaces before the separating surfaces are formed by a cutting operation. It would have been obvious to one of ordinary skill in the art to provide the limitation of claim 19 because one of ordinary skill in the art would have been motivated to prevent fiber dust from entering the atmosphere and becoming a hazard to workers in accordance with methods well known in the art.

Claim 22 is satisfied for the reasons cited above.

The limitation of claim 23 is well known in the art for providing a flange which may have an adhesive provided thereon in order to allow easy connection of the lamination to an adjacent structure or portion of insulating material. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide this limitation for the above noted motivation.

The limitation of claim 24 is well known in the art for providing users of the insulating product with markings which allow the insulating product to be easily cut to standard widths. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide this limitation for the above noted motivation.



The limitations of claims 37, 38 and 40-44 are satisfied for the reasons provided above.

Regarding claim 47, Noergaard clearly suggests laminations having different layers, such as nonwoven materials in combination with other materials or metal foil in combination with a fibrous layer or plastic foil (column 12, lines 58-64).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noergaard as applied to claims 1, 3-6, 8-12, 19, 22-24, 37, 38, 40-44 and 47 above, and further in view of Klose (US 4917750).

Regarding claim 2, it is generally known in the art to remove the fibers which are substantially parallel to the large surface of an insulating material of the type taught by Noergaard. For example, Klose suggests removing such fibers in order to provide an insulating material of extremely high compressive strength (column 12, lines 42-57; Figure 10). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the limitation of claim 2 because one of ordinary skill in the art

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would have been motivated to achieve extremely high compressive strength in accordance with the teachings of Klose.

8. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noergaard as applied to claims 1, 3-6, 8-12, 19, 22-24, 37, 38, 40-44 and 47 above, and further in view of Metcalfe (US 4128678).

Regarding claim 17, it is generally known in the art to direct multiple webs of insulating material into a furnace in order to cure multiple webs in a single heating process. As to curing after application of the laminations, Metcalfe teaches that such curing may be suitably provided either before or after application of the lamination as a matter of routine design choice (column 6, lines 52-62). It would have been obvious to one of ordinary skill in the art of time the invention to provide the limitation of claim 17 because one of ordinary skill in the art would have been motivated to perform curing of multiple webs in a single heating process and suitably attach the lamination in accordance with known methods for the reasons provided above.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL A. TOLIN whose telephone number is (571)272-8633. The examiner can normally be reached on M-F 9am to 5:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Phillip Tucker can be reached on 571-272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael A Tolin/  
Primary Examiner, Art Unit 1745